AMENDED CLAIMS

EXCLUSIVELY PRESENTED FOR CLARITY

037 What is claimed is:

1. A Voltage Dosimeter, including an apparatus and method for maintaining a desired negative electrode voltage of a voltage producing source within a first predetermined range of values having an upper limit and a lower limit so as to control the positive electrode voltage of said voltage producing source and maintain a stable base state of voltage production to eliminate the necessity for constant maximum voltage production, the said Voltage Dosimeter also including an electronic control unit (ECU) having memory, two electrodes, two voltimeters connected to each said electrode for measuring voltage at each said electrode, an electric switch, a said voltage producing source with a circulation time delay between electrical energy production and electrical energy detection, a battery, said voltage producing source with its consequential positive electrode voltage controlled by said ECU for delivering selected said voltage producing doses and said positive electrode voltage, the said voltage producing source having a sequential plurality of said voltage producing doses and consequential said positive electrode voltage doses ranging from a smallest dose to a largest dose, a

reaction time denoting local or extreme maximum or minimum said voltage producing and positive electrode voltage production, the method comprising:

delivering the largest said voltage producing dose and thereby the largest said positive electrode voltage while repeatedly sequencing through the plurality of sequential positive electrode voltage doses beginning with the smallest dose and proceeding to an adjacent dose in the said sequence after a predetermined time interval has elapsed until said negative electrode voltage level of said voltage producing source attains the desired voltage level at which point a corresponding said voltage producing dose and a said positive electrode voltage dose are selected to occupy a said stable base state from the said plurality of said sequential said voltage producing and said positive electrode voltage doses;

delivering the selected said voltage producing and said positive electrode dose so as to maintain the said negative electrode voltage level in its desired range in the said stable base state.

2. The method of claim 1 wherein the said circulation time is determined by:

means for storing a said predetermined number of said base state voltage values in memory; and

means for determining a predetermined said sequence of said base state levels.

3. The method of claim 1 wherein the said reaction time is determined by logic flow charts.

4. The method of claim 1 in which a said plurality of said sequential positive electrode voltage doses are generated in fuel cells.

5. The method of claim 1 wherein a said plurality of said sequential positive electrode voltage doses are generated by steam.

6. The method of claim 1 wherein the said plurality of positive electrode voltage doses are connected by logic switches.

7. The method of claim 1 wherein a predetermined said negative electrode voltage level for a predetermined amount of time produces a predetermined said voltage producing and said positive electrode voltage dose.

8. The method of claim 1 wherein a first closing of said electric switch produces a first said battery discharge and a first said negative electrode voltage level in said fuel cell.

9. The method of claim 1 wherein the operating said negative electrode voltage range varies with application.

10. The method of claim 1 wherein voltage doses are connected by said switches controlled by logic.

11. A Voltage Dosimeter, including an apparatus and method for maintaining a desired negative electrode voltage of a fuel cell within a first predetermined range of values having an upper limit and a lower limit so as to control said positive electrode voltage of the said fuel cell and maintain a stable base state of voltage production to eliminate the necessity for constant maximum voltage production, the said Voltage Dosimeter also including an electronic control unit (ECU) having memory, a battery, two electrodes, two voltimeters connected to each said electrode for measuring voltage at each said electrode, an electric switch, a said fuel cell with a circulation time delay between electrical energy production from a reactant gas flow rate to electrical energy detection, said reactant gas flow rate controlled by the said ECU through

solenoid valves for delivering selected said voltage producing doses and said positive electrode voltage doses, the said Voltage Dosimeter having a sequential plurality of said voltage producing doses, consequential said positive and negative electrode voltage doses ranging from a smallest dose to a largest dose, a reaction time denoting local or extreme maximum or minimum said reactant gas flow rate with local or extreme maximum or minimum said voltage producing and said negative and positive electrode voltage production, the method comprising:

delivering the largest said reactant gas flow rate producing the largest said voltage producing dose and thereby the largest said positive electrode voltage dose to the said circuit while repeatedly sequencing through the plurality of the said sequential negative electrode voltage doses beginning with the smallest dose and proceeding to an adjacent dose in the said sequence after a predetermined time interval has elapsed until the said negative electrode voltage level of the said voltage producing source attains the desired voltage level at which point a corresponding said reactant flow rate with a said voltage producing dose and a said positive electrode voltage dose are selected to occupy the said base state from the said plurality of said sequential said voltage producing and said positive electrode voltage doses;

delivering the selected said reactant gas flow rate with the consequential said voltage producing and said positive electrode dose so as to maintain said negative electrode voltage level in its desired range in the said stable base state.

12. The method of claim 11 wherein said circulation time is determined by:

means for storing a predetermined number of said base state voltage values in memory; and

means for determining a predetermined said sequence of said base state levels.

13. The method of claim 11 wherein the said reaction time is determined by logic flow charts.

14. The method of claim 11 wherein the said plurality of said positive electrode voltage doses are connected by logic switches.

15. The method of claim 11 wherein a predetermined said negative electrode voltage level for a predetermined amount of time produces a said voltage producing and said positive electrode voltage dose.

16. The method of claim 11 wherein a first closing of a said electric switch produces a first said battery discharge and a first negative electrode voltage level.

17. The method of claim 11 wherein the operating said negative electrode voltage range varies with application.

18. The method of claim 11 wherein said negative electrode voltage doses are connected by switches controlled by logic.

19. The method of claim 11 wherein said reactant gases are hydrogen and oxygen.